NORTH CENTRAL TEXAS ATRAZINE REMEDIATION PROJECT 501

Limestone County Portion of the Richland-Chambers Watershed

Final Report
Clean Water Act. Section 319(h) Non-point Source Grant
Contract #99-8

Limestone-Falls Soil & Water Conservation District #501
Groesbeck, Texas

Texas State Soil and Water Conservation Board – Regional Office
Dublin, Texas

USDA – Natural Resource Conservation Service
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INTRODUCTION

The North Central Texas Atrazine Remediation Project (501) (NCTARP) was implemented to reduce runoff of atrazine, a chemical herbicide, used in the production of corn and sorghum crops. Reduction of atrazine runoff through Best Management Practices (BMPs), thereby, restoring drinking water quality in Richland-Chambers reservoir in Navarro-Freestone counties. This action is to allow Richland-Chambers reservoir to be removed from the State of Texas $303(d) list.

The Texas State Soil and Water Conservation Board (TSSWCB) was authorized to address Agricultural/Silvicultural non-point source pollution related to the reduction of atrazine in drinking water in the project area. Currently, non-point source pollution is being addressed through the development and implementation of certified Water Quality Management Plans (WQMPs), provided by TSSWCB and made possible through U.S. Environmental Protection Agency (EPA) Clean Water Act 319 Grant Program. Between August, 2000 and March, 2004, when the WQMP Implementation Assistance in Limestone county began, twelve Certified WQMPs were developed and implemented through Senate Bill 503.

WQMP Implementation Assistance in the NCTARP focused on a voluntary incentive-based program to assist landowners in complying with State Water Quality regulation. This program assisted landowners with technical information in the development of a site-specific WQMP for their operation, with both production goasl and environmental

impact of the operation being addressed. The incentive based portion of the program provides financial assistance to landowners to help with implementation of water quality BMPs.

A goal was set for the development and implementation of 5 WQMPs in Limestone County, however, twelve (12) WQMPs were implemented through the program. To achieve a level of pollution prevention and abatement, Limestone-Falls SWCD determined the most cost effective and most needed pollution abatement practices. Limestone-Falls SWCD also determined which landowners received technical assistance for the development and implementation of WQMPs based on a two-tier system. The system consists of the following:

* High priority: Reduction of Atrazine Usage
* High priority: Soil Erosion Control on Cropland

The WQMP Implementation Assistance in the Richland-Chambers Watershed Project (Limestone County portion) provided cost-share funds, at a 75% rate not to exceed $10,0000 per producer. These funds helped producer with the expense of implementing water quality BMPs. To be eligible for cost share assistance, through the 319 grant, a producer had to have a certified WQMP and previously not received any cost-share funds through the 503 Program.

ABSTRACT – PROJECT ACCOMPLISHMENTS

The WQMP Implementation Assistance in the North Central Texas Atrazine Remediation Project – Limestone county portion encompasses approximately 32,400 acres in the watershed of Richland Creek and Richland-Chambers Reservoir. This portion of the watershed is located in the northwest part of the county in Central Texas. Also, twenty two (22) Floodwater Protection sites can be found in this watershed.

Producers had been using atrazine as a herbicide to control weeds in fields planted to corn and sorghum several years. Atrazine is a member of traizine family of herbicides under several trade names, such as, Aatrex, Biceps, Conceps and others. This herbicide has been used to control broadleaf weeds and annual grasses along roadsides, Conservation Reserve Program (CRP), as well as, fallow and cultivated fields. Use of atrazine is to be in accordance with its labeling and with the Worker Protection Standards, 40 CFR part 170.

Atrazine can travel (seep or leach) through the soil and can enter ground water which may be used for drinking water. Users are advised not to apply atrazine to sandy and loamy sand soils where the water table is close to the surface and where these soils are very permeable i.e. well drained. This product may not be used within 50 ft. of intermittent streams, rivers or lakes and reservoirs. Atrazine can not be applied within 66 ft. of where a field surface runoff enters a stream. On highly erodible soils, a 66 ft. buffer or filter strip must be planted with grass.

The TSSWCB was charged with addressing non-point source pollution from agriculture/silviculture through assisting producers with the development and implementation of WQMPs. In an effort to assist landowners with the expense of implementing BMPs, the WQMP Implementation Assistance in the watershed project was initiated in 1999 and funded by U.S. EPA Clean Water Act 319(h) grant program.

This project provided landowners with assistance in the development of their WQMP, along with cost-share assistance to help implement approved water quality BMPs. Limestone-Falls SWCD entered into project agreement August, 2000 agreeing to provide 5 WQMPs and obligated $50,000. A part time employee was hired.

Producer participation was achieved by personal letter from the SWCD to persons covered in the USDA-Farm Service Agency (FSA) program within the watershed informing each of the 319 program. Also, by local newspapers and the local Texas Agricultural Extension Service assisted with informing producers.

The local SWCD had 15 responses that showed interest and requested planning assistance. Only twelve (12) producers were accepted and WQMPs developed to Certified Resource Management Systems (RMSs) standards. To address atrazine reduction and soil erosion concerns, producers installed a variety of practices aimed at reducing the amount of herbicide and sediment entering surface waters. WQMPs covered 3,744 acres or about 12% of the watershed in Limestone county.

Project accomplishments by cost share practices include conversion of cropland to permanent grass – 714 acres, grass waterways - 10 acres, critical area treatment - 38

acres, grade stabilization structures - 3 no., ponds – 4 no., fencing – 17,450 ft..

In 2000, $50,000 was originally obligated for the project, however, an additional

$50,000 was allocated in 2001.

PROJECT ACCOMPLISHMENTS BY TASK

Tasks, Objectives, Schedules

TASK 1: Program Coordination and Management

Objective: Organize an integrated team among TSSWCB. Limestone-Falls SWCD and NRCS involved with the North Central Texas Atrazine Remediation Project.

Subtask 1.1 Conduct semi-annual meetings with project participants to discuss technical assistance activities.

* Representatives meet on eight occasions to discuss project activities. The local Conservation Technician met with the SWCD monthly Board Meetings on fifty nine occasions to keep them informed on project progress.

Subtask 1.2 Prepare seventeen quarterly and final report. (see Appendix A).

TASK 2: Water Quality Education and Demonstration of Best Management Practices to Reduce Atrazine

Objective: To promote the implementation of cost effective BMPs to reduce atrazine runoff by informing and education corn and sorghum producers about appropriate BMPs.

Subtask 2.1: Provide events describing methods for reducing atrazine runoff.

Subtask 2:2: SWCD selected appropriate agricultural BMPs practices for reducing atrazine runoff.

TASK 3: Development and Implementation of WQMPs

Objective: To encourage agricultural producers to comply with state water quality laws through traditional voluntary based incentive program and assistance to producers in developing and implementing WQMPs.

Subtask 3.1: The Limestone-Falls SWCD will hire a part-time Conservation Technician to provide technical assistance producers to develop WQMPs.

* SWCD hired a part-time Conservation Technician (see APRENDIX A)

Subtask 3.2: The SWCD, with assistance from NRCS, TAES, and TAEX, will send out notifications announcing the availability of assistance for implementing WQMP-BMPs, prioritize the WQMP applications and rank landowners based on greatest need of BMP implementation.

* SWCD sent 142 letters to landowners (according the Farm Service Agency records, in the watershed announced availability of the program.
* News releases in local newspapers.

Subtask 3.3: The SWCD Conservation Technician and NRCS will provide landowners information on appropriate BMPs and will work with TSSWCB Regional Office in developing and implementing WQMPs.

Subtask 3.4: The SWCD Conservation Technician will develop approximately 5 WQMPs. All WQMPs will be completed by the Conservation Technician with assistance from the NRCS as needed.

* Conservation Technician prepared 12 WQMPs from 15 applications.
* Water Quality Management Plan sample (see APPENDIX C)

Subtask 3.5: TSSWCB will provide technical review and certification of WQMPs. During this process, TSSWCB will ensure that all WQMPs are consistent with state water quality standards and certify those that meet that criteria.

* TSSWCB reviewed and certified the 12 WQMPs for technical merit.

Subtask 3.6: The TSSWCB, with assistance from the SWCD, will ensure that the landowners implement the WQMPs as specified and agreed to in the WQMPs implementation schedule. The Conservation Technician will conduct annual status reviews on all WQMPs developed to ensure the implementation schedule is followed and

funds are used.

* Status reviews were performed. Conservation practices applied in a timely manner. Exception was 3 WQMPs had to be reapplied due to no fault of the producer.

TASK 4: Inventory of landuse practices and BMPs implemented in the Limestone-Falls SWCD

Objective: To compile and document information on the amount and types of BMPs implemented through WQMPs, Conservation Plans, and EQIP contracts.

Subtask 4.1: The SWCD and NRCS wile compile information on the map, location, numbers and types of BMPs implemented within the watershed. (see Appendix D)

Coordination, Roles and Responsibilities:

Participating Agencies and Organizations along with their roles in this project include:

* Texas State Soil and Water Conservation Board: Lead agency responsible for technical review and certification of WQMPs. Provide assistance to the Limestone-Falls SWCD in the implementation and development of WQMPs. Also, assist the SWCD in inventorying current BMPs and land use practices and the implementation of WQMPs.

* Limestone-Falls Soil and Water Conservation District: Set priorities, approve applications and WQMPs and oversee Conservation Technician during the development and implementation of WQMPs/BMPs.

* USDA-Natural Resources Conservation Service: Work with and assist local SWCD and TSSWCB in development and implementation of WQMPs.

* Texas Department of Agriculture: Ensure compliance with label. Assist with education on proper application of atrazine.

APPENDIX B

PROJECT PHOTOS OF WATER QUALITY PRACTICES

Best Management Practices (BMPs) are essential to protecting downstream water supply.

Treatment of critical areas on cropland fields are very costly to the farmers, but by shaping & establishing these areas to permanent grass, sedimentation and unwanted pesticides downstream will be limited.

Best Management Practices (BMPs) like grassed waterways hold pesticide and reduce soil erosion within a cropland field.

Converting cropland by sprigging of improved Bermuda grass reduces use of Atrazine herbicide and soil erosion on over 700 acres in the watershed.

Vegetated filter strips allow water leaving a cropland field to safely enter an intermittent stream.

Approximately, 100 acres of cropland was planted to WW B-Dahl Old World bluestem to be managed for hay and grazing.

Newly installed pond to provide livestock water and grazing management in converted cropland field.

Cropland soils, classified as Highly Erodible Land (HEL), were planted to permanent grass. Fences installed to aid in management activities, such as, prescribed grazing, protection of critical areas and improve water quality and quantity.

Water quality and water quantity improve with a combination of BMPs, like proper tillage, nutrient management, pest management and other conservational practices